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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,756	10/21/2003	Kazuhito Saeki	3140-015	6007
33432 7590 12/13/2007 KILYK & BOWERSOX, P.L.L.C. 400 HOLIDAY COURT SUITE 102 WARRENTON, VA 20186			EXAMINER WONG, ALLEN C	
			ART UNIT 2621	PAPER NUMBER
			MAIL DATE 12/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/689,756	<b>Applicant(s)</b> SAEKI, KAZUHITO	
	<b>Examiner</b> Allen Wong	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/21/07 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-12 have been read and considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (4,972,494) in view of Long (4,860,096).

Regarding claim 1, White discloses an image processing system comprising:

a camera for picking up a workpiece (fig.1, element 12 is a camera for picking up images on the workpiece and col.5, ln.65-68); and

an image processing apparatus for capturing image pickup data of the workpiece picked up by said camera and performing image processing (fig.1, element 140 is a computer that processes the image data via comparison and determination of data as picked up by camera 12, see col.8, ln.52-63 and col.9, ln.6-15),

said image processing apparatus including a trigger receiving section for receiving a trigger from an outside to initiate capture of workpiece image pickup data by said camera (col.8, ln.4-33, in fig.1, element 60 is a detector that has a sensor element 72 that permits the detection of the package 18, in that the package is detected from the outside or external initiating source for initiating the capture of workpiece image pickup data by element 12 via supplying the trigger signal to the camera 12),

an image processing section for performing image processing with respect to each of the image pickup data picked up by the camera after receipt of the trigger from the outside to generate image processing result data (col.8, ln.52-col.9, ln.18, White discloses the statistics are stored and processed for comparison to ascertain the number and the nature of the errors of the obtained data to determine whether the item or package from the workpiece image data is defective, after the collection or gathering of the workpiece image pickup by camera 12), and

a statistical processing section for performing statistical processing of each image processing result data from the image processing section (col.4, ln.12-17; White discloses that the measure data or statistics are sampled and stored for evaluation, analysis and processing of the image data and its statistics, also col.8, ln.52-col.9, ln.18, White discloses the statistics are stored and processed for comparison to ascertain the

number and the nature of the errors of the obtained data; also fig.5, element 278 is a histogram processor that stores and processes measured statistics as histograms are a collection of statistics or numerical parameters, as disclosed in col.13, ln.6-12).

White does not specifically disclose a trigger generation section for generating a predetermined number of internal triggers at predetermined intervals via an interval timer after said trigger receiving section receives the trigger from the outside, each of the internal triggers initiating capture of workpiece image pickup data at the predetermined intervals. However, Long teaches the generation of the predetermined number of internal triggers at predetermined intervals via an interval timer after receiving the trigger from the outside (col.9, ln.34-45 and col.13, ln.39-55, Long discloses that after the receipt of the outside triggering of the switch to ASYNC state, the generation of internal triggers is set at predetermined cycles or intervals for repetitively capture workpiece image data), each of the internal triggers initiating capture of workpiece image pickup data at the predetermined intervals (col.3, ln.21-28, col.9, ln.34-45 and col.13, ln.45-55, Long discloses that the user can initiate and control the number of internal triggers for capturing the workpiece image data at timed cycles or timed intervals that are already predetermined). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of White and Long, as a whole, for viewing the image data in real time in a clear, accurate manner at the user's convenience (Long col.4, ln.3-6).

Regarding claim 2, White does not specifically disclose wherein a user can

arbitrarily set the number of generations of the internal triggers. However, Long teaches wherein a user can arbitrarily set the number of generations of the internal triggers (col.3, ln.21-28, col.9, ln.34-45 and col.13, ln.45-55, Long discloses that the user can initiate and control the number of internal triggers for capturing the workpiece image data at timed cycles or timed intervals that are already predetermined). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of White and Long, as a whole, for viewing the image data in real time in a clear, accurate manner at the user's convenience (Long col.4, ln.3-6).

Regarding claim 3, White discloses wherein the image processing apparatus includes a display section for displaying a result calculated by the statistical processing section (fig.1, element 160 is a display for outputting the data for the operator to view as outputted by the computer).

Regarding claim 4, White discloses an image processing method comprising:  
receiving an external trigger from the outside to initiate image pickup processing of a workpiece (col.8, ln.4-33, in fig.1, element 60 is a detector that has a sensor element 72 that permits the detection of the package 18, in that the package is detected from the outside or external initiating triggering source for initiating the capture of workpiece image pickup data by element 12 via supplying the trigger signal to the camera 12);

picking up workpiece image pickup data by a camera after receipt of each of the the external trigger (col.8, ln.4-33, in fig.1, element 60 is a detector that has a sensor element 72 that permits the detection of the package 18, in that the package is detected

from the outside or external initiating source for initiating the capture of workpiece image pickup data by element 12 via supplying the trigger signal to the camera 12);

performing image processing with respect to each of the workpiece image pickup data picked up by the camera after receipt of the external trigger to generate, image processing result data (col.8, ln.52-col.9, ln.18, White discloses the statistics are stored and processed for comparison to ascertain the number and the nature of the errors of the obtained data to determine whether the item or package from the workpiece image data is defective, after the collection or gathering of the workpiece image pickup by camera 12); and

performing statistical processing of each image processing result data obtained from the image processing (col.4, ln.12-17; White discloses that the measure data or statistics are sampled and stored for evaluation, analysis and processing of the image data and its statistics, also col.8, ln.52-col.9, ln.18, White discloses the statistics are stored and processed for comparison to ascertain the number and the nature of the errors of the obtained data; also fig.5, element 278 is a histogram processor that stores and processes measured statistics as histograms are a collection of statistics or numerical parameters, as disclosed in col.13, ln.6-12).

White does not specifically disclose generating a predetermined number of internal triggers at predetermined intervals via an interval timer after receiving the trigger from the outside. However, Long teaches generating the predetermined number of internal triggers at predetermined intervals via an interval timer after receiving the trigger from the outside (col.9, ln.34-45 and col.13, ln.39-55, Long discloses that after

the receipt of the outside triggering of the switch to ASYNC state, the generation of internal triggers is set at predetermined cycles or intervals for repetitively capture workpiece image data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of White and Long, as a whole, for viewing the image data in real time in a clear, accurate manner at the user's convenience (Long col.4, ln.3-6).

Regarding claim 5, White does not specifically disclose setting the number of generations of the internal triggers. However, Long teaches wherein a user can arbitrarily set the number of generations of the internal triggers (col.3, ln.21-28, col.9, ln.34-45 and col.13, ln.45-55, Long discloses that the user can initiate and control the number of internal triggers for capturing the workpiece image data at timed cycles or timed intervals that are already predetermined). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of White and Long, as a whole, for viewing the image data in real time in a clear, accurate manner at the user's convenience (Long col.4, ln.3-6).

Regarding claim 6, White discloses further comprising: displaying a result calculated from the statistical processing (fig.1, element 160 is a display for outputting the data for the operator to view as outputted by the computer).

Regarding claims 7 and 10, White does not disclose wherein the statistical processing comprises generating at least one of a maximum value of variation in workpiece position, a minimum value of variation in workpiece position, and an average value of variation in workpiece position. However, White does disclose the concept of a



histogram, a collection or variation of numerical values stored (also fig.5, element 278 is a histogram processor that stores and processes frame data of workpiece positions that are measured statistics, and that the measured statistics are organized as histograms which are a collection or a variation of statistics or numerical parameters, as disclosed in col.13, ln.6-12). Therefore, it would have been obvious to one of ordinary skill in the art to obtain and generate a minimum value of variation in workpiece position, and a maximum value of variation in workpiece position as ascertained from White's teachings of using a histogram since a histogram contains a variety of values that must include a maximum value and a minimum value during the data gathering process, and that the average value can be ascertained from the simple addition of all of the variation of values and divide by the number of values obtained for providing an accurate representation of measured statistical data of workpiece image data.

Regarding claims 8 and 11, White discloses wherein the statistical processing comprises eliminating image processing result data that deviates from a predetermined range (col.8, ln.56 to col.9, ln.18, White discloses that during the processing and if the comparison of erroneous data to a thresholded value, then the erroneous data removes the package from the conveyor, thus, resulting the elimination of deviated image processing result data).

Regarding claims 9 and 12, White does not specifically disclose wherein the predetermined intervals are set to avoid synchronizing with a period of an edge position of the workpiece. However, Long teaches that the predetermined intervals are set to avoid synchronization with the period of the edge position of the workpiece (col.13,

In.39-55, the user can adjust the clock or internal timer to up or down to change the sampling rate and that the "ASync" state is set to avoid the synchronous state).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of White and Long, as a whole, for viewing the image data in real time in a clear, accurate manner at the user's convenience and providing the user flexibility for adjustment (Long col.4, In.3-6).

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Allen Wong', is written over the printed name.

Allen Wong  
Primary Examiner  
Art Unit 2621

AW  
12/10/07